WHAT IS CLAIMED IS:

1. A stent for delivering a therapeutic substance in a body vessel comprising:

a first material carried by the stent containing a therapeutic substance; and

a second material carried by the stent to convert a first type of energy received by the second material from an energy source positioned external to the body vessel to a second type of energy, wherein the second type of energy promotes release of the therapeutic substance from the first material.

2. The stent of Claim 1, wherein the second material is selected from the group consisting of Au, Au-alloy, Au with a silica core, and ferrimagnetic glass-ceramic.

3. The stent of Claim 1, wherein the second type of energy is thermal energy.

4. The stent of Claim 1, wherein the second material is disposed in microdepots positioned on the surface of the stent.

5. The stent of Claim 1, further comprising a topcoat deposited over at least a portion of the first material.

6. The stent of Claim 1, wherein the second material comprises Au particles having a silica nanoparticle core.

7. The stent of Claim 1, further comprising a third material carried by the stent to convert a third type of energy received by the third material from an energy source positioned external to the body vessel to a fourth type of energy, wherein the fourth type of energy promotes release of the therapeutic substance from the first material.

8. The stent of Claim 7, wherein the first and third types of energy are electromagnetic energy, and wherein the electromagnetic energy of the first energy type has a different wavelength than the third energy type.

9. The stent of Claim 1, wherein the first type of energy is non-cytotoxic electromagnetic waves.

10. The stent of Claim 9, wherein the second material is capable of converting electromagnetic waves with wavelengths between 800 and 1200 nm into thermal energy.

11. The stent of Claim 1, wherein the first material is a temperature-sensitive hydrogel.

12. The stent of Claim 11, wherein the temperature-sensitive hydrogel is in thermal communication with the second material.

13. The stent of Claim 11, wherein the temperature-sensitive hydrogel is selected from the group consisting of N-isopropylacrylamide, polyoxyethylene-polyoxypropylene block copolymers, poly(acrylic acid) grafted pluronic copolymers, chitosan grafted pluronic copolymer, elastin mimetic polypeptides, and combinations and mixtures thereof.

14. A method of delivering a therapeutic substance from a stent in a body vessel comprising:

inserting into a body vessel a stent comprising a first material containing a therapeutic substance and a second material capable of converting a first type of energy to a second type of energy; and

applying to the second material a first type of energy from an energy source external to the body vessel wherein the second material converts the first type of energy to the second type of energy and the second type of energy promotes the release of the therapeutic substance from the first material.

15. The method of Claim 14, wherein the second material is selected from the group consisting of Au, Au-alloy, Au having a silica core, and ferromagnetic glass-ceramic.

16. The method of Claim 14, wherein the second type of energy is thermal energy.

17. The method of Claim 14, wherein the second material is disposed in microdepots positioned on the surface of the stent.

18. The method of Claim 14, wherein the stent further comprises a topcoat deposited over at least a portion of the first material.

19. The method of Claim 14, wherein the second material comprises Au particles having a nanoparticle core.

20. The method of Claim 14, wherein the stent further comprises a third material carried by the stent to convert a third type of energy received by the third material from an energy source positioned external to the body vessel to a fourth type of

energy, wherein the fourth type of energy promotes release of the therapeutic substance from the first material.

21. The method of Claim 20, wherein the first and third types of energy are electromagnetic energy, and wherein the electromagnetic energy of the first energy type has a different wavelength than the third energy type.

22. The method of Claim 14, wherein the first type of energy is non-cytotoxic electromagnetic waves.

23. The method of Claim 22, wherein the second material is capable of converting electromagnetic waves with wavelengths between 800 and 1200 nm into thermal energy.

24. The method of Claim 14, wherein the first material is a temperature-sensitive hydrogel.

25. The method of Claim 24, wherein the temperature-sensitive hydrogel is in thermal communication with the second material.

26. The method of Claim 24, wherein the temperature-sensitive hydrogel is selected from the group consisting of N-isopropylacrylamide, polyoxyethylene-polyoxypropylene block copolymers, poly(acrylic acid) grafted pluronic copolymers, chitosan grafted pluronic copolymer, elastin mimetic polypeptides, and combinations and mixtures thereof.

27. A stent for delivering thermal energy to a body vessel comprising:

a tubular body for implanting in a body vessel; and

an energy converter carried by the tubular body to convert a first type of energy into thermal energy, wherein the energy converter is positioned to release the thermal energy to tissues adjacent to the tubular body and is responsive to an energy source remote from and not in direct physical contact with the energy converter.

28. A system for delivering a therapeutic substance comprising:

a device for implanting in a patient's body;

a reservoir carried by the device containing a therapeutic substance;

an energy converter carried by the device to convert a first type of energy to a second type of energy to release the therapeutic substance from the reservoir; and

an energy emitter for emitting the first type of energy to the energy converter.